AMSAT News Service Weekly Bulletins
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AMSAT NEWS SERVICE
ANS-057
The AMSAT News Service bulletins are a free, weekly news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS publishes news related to Amateur Radio in Space including reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

The news feed on http://www.amsat.org publishes news of Amateur Radio in Space as soon as our volunteers can post it.

Please send any amateur satellite news or reports to:
ans-editor at amsat.org.

In this edition:

* OSCAR Number EO-88 for Nayif-1
* Two projects with AMSAT ties selected for NASA launches
* ARISS Equipment on SpaceX Launch
* VEGA Flight Opportunity for Multiple Small Satellites
* Satellite Changes in AMSAT Keplerian Element Distribution
* LUSAT LO-19 Calls Home
* Expect More from Amateur BY70-1 Youth Space Program
* AMSAT Events
* ARISS News
* Satellite Shorts from All Over

SB SAT @ AMSAT $ANS-057.01
ANS-057 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 057.01
 >From AMSAT HQ KENSINGTON, MD.
DATE Febuary 26, 2017
To All RADIO AMATEURS
BID: $ANS-057.01

OSCAR Number EO-88 for Nayif-1

In accordance with the request sent to the AMSAT-NA Board of Directors for an
OSCAR number for the UAE CubeSat, Nayif-1, and the statement that all of the conditions for an OSCAR number have been met, I hereby by the authority vested
in me by the AMSAT-NA president, do convey on Nayif-1 the designation Emirates
Oscar 88 or EO-88.

Along with the rest of the Amateur Radio satellite community, I hope that EO-
88 will meet all of its objectives.

I wish you and your group the best of luck in this and future endeavors to keep Amateur Radio in space.

[ANS thanks William A. (Bill) Tynan, W3XO, OSCAR Number Administrator for the above information]

Two projects with AMSAT ties selected for NASA launches

Two cubesat missions with ties to AMSAT have been selected as part of the eighth round of the NASA CubeSat Launch Initiative. These spacecraft are eligible for placement on a launch manifest after final negotiations, depending
on the availability of a flight opportunity.

TJREVERB is a CubeSat from Thomas Jefferson High School for Science and Technology, in Alexandria, Virginia. This satellite will include an AMSAT Fox
mode U/v FM radio system, and will be capable of serving as an analog FM repeater.

HuskySat-1 from the University of Washington in Seattle will carry a mode V/u
linear transponder and 1200 baud BPSK beacon similar to RadFXsat-2. The satellite will demonstrate plasma propulsion and high gain telemetry in advance
of a larger CubeSat lunar mission.

The complete list of satellites selected may be found at on the NASA web page.

https://www.nasa.gov/feature/nasa-announces-eighth-class-of-candidates-for-launch-of-cubesat-space-missions

http://www.amsat.org/?p=5795

[ANS thanks Drew, KO4MA, AMSAT Vice-President for Operations for the above information]

ARISS Equipment on SpaceX Launch

Included as part of the successful launch of the SpaceX Dragon vehicle to ISS is an ARISS Ericsson 2 meter VHF radio. This radio will replace the Ericsson radio that failed a few months ago. The VHF radio is used for school group contacts and amateur packet radio in the Columbus module. Once the Dragon vehicle is berthed to ISS, the Ericsson will be unstowed and, at some point, installed in Columbus, replacing the UHF radio that is now supporting APRS packet and some school contacts.

The unmanned cargo ship packed with food and supplies for astronauts arrived
safely at the International Space Station Thursday, 2/23/2017. The Dragon cargo ship was grabbed by the station's robotic arm at 5:44 am (1044 GMT).

Our thanks to SpaceX on an outstanding and historic flight from Kennedy Space Center's Launch Pad 39A, where many Space Shuttle missions and nearly all the Apollo moon missions were launched. We also would like to thank our ARISS benefactors-NASA and CASIS, the Center for the Advancement of Science in Space. And, of course, our amateur radio long-time sponsors-our national amateur radio organizations around the world, including the American Radio Relay League (ARRL) in the US, and our international AMSAT organizations, including AMSAT-NA.

ARISS is also making great progress on the development of the new interoperable radio system that we hope to use to replace our aging radio infrastructure in the Columbus module and the Service module. The hard (and expensive) part of this effort is just beginning, with testing and human certification on the horizon. We thank all that have donated to the cause thus far. We hope you continue to help ARISS move forward through your support, including your volunteer time and talent and, of course, financial contributions through the AMSAT web site donate button.

[ANS thanks Frank Bauer, KA3HDO, ARISS International Chair, AMSAT-NA V.P. for Human Spaceflight for the above information]

VEGA Flight Opportunity for Multiple Small Satellites

Europe’s Vega small launcher is set to demonstrate its extended capability to
deploy multiple light satellites using its new versatile Small Satellites Mission Service (SSMS) dispenser, in the second half of 2018.

This demonstration provides the first of the launch opportunities under the new Light satellite, Low-cost Launch opportunity (LLLor L3) Initiative initiated at the ESA Council Meeting at Ministerial Level in December 2016 with
the aim to provide low-cost and regular launch services for European Institutional light satellites through full exploitation of the Ariane 6 and Vega C launch systems’ capabilities.

This first proof-of-concept flight using the current Vega launch system will demonstrate and validate standard innovative services for light satellites.

The SSMS dispenser with its modular design enables Vega to provide launch opportunities for light satellites with an overall mass ranging from 1 kg CubeSats up to 400 kg minisats with different alternative configurations and relevant combinations under a ‘rideshare’ concept.

Potential customers, be they European public-sector organizations or other entities, are invited to respond to the joint ESA and European Commission Announcement of Opportunity, which can be downloaded together with its questionnaire, by 31 March.
http://www.esa.int/Our_Activities/Launchers/Vega_flight_opportunity_for_multiple_small_satellites
(including links for the application process due by March 31)

[ANS thanks the European Space Agency for the above information]

Satellite Changes in AMSAT Keplerian Element Distribution

The following five satellites/object numbers have been deleted:

SATELLITE	NORAD CAT ID	REASON
BY70-1	41909	Deorbit 2-18-2017
OBJECT 41930	41930	Not Amateur Sat-ISS Launch
EGG	41933	Not Amateur Sat-ISS Launch
OBJECT 41934	41934	Not Amateur Sat-ISS Launch
TuPOD	41936	Batteries Dead-ISS Launch

Thanks to Nico Janssen for his work in predicting BY70-1's deorbit.

As noted last week, Nayif-1 was launched with 103 other satellites on 2-15-2017. The cloud of satellites is beginning to spread and Nico Janssen, PA0DLO, has developed a TLE set that many on AMSAT-BB say is very accurate. I have included it in this week's distribution. Thanks again to a very busy Nico for his excellent work.

Detailed doppler measurements show that Nayif 1 is object 42017, 2017-008BX.

Keith Pugh, W5IU, suggested that I include Nayif-1 in the regular distribution so those using apps like PocketSat would be able to track it. Good idea Keith. (I have PocketSat myself!)

[ANS thanks AMSAT's Keeper of the Keps Ray Hoad, WA5QGD for the above information]

LUSAT LO-19 Calls Home

On Feb-20 15:45z LUSAT LO-19 on Orbit 141493 had been heard with strong carrier on 437.125 ± Doppler.

LUSAT had been in space last 27 years and still emits it's CW carrier un-modulated with 900 mW.

Now and then the satellite comes alive, it is useful to test reception and demonstrate Doppler, check antennas, etc.

Please try to listen, on
http://amsat.innova-red.net/pass
you will find an easy way to locate, receive, and thank you if reported.

[ANS thanks Pedro, LU7ABF for the above information]

Expect More from Amateur BY70-1 Youth Space Program

In announcing the end of a successful mission the students who built the amateur radio FM transponder satellite BY70-1 say “We hope more Amateur

youth
space program will be brought to you in the near future!”

The 2U CubeSat BY70-1 was built by students from the Beijing Bayi High School
and carried into a 524 x 212 km orbit on a CZ-2D rocket launched from the Taiyuan Space Launch Center on December 28, 2016.

On February 17, 2017, as the satellite was about to burn up on its re-entry into the Earth’s atmosphere, this end of mission statement was posted on the school’s website.

Dear friends of BY70-1:

Satellite BY70-1 has completed all designed missions. For the amateurs who completed 2-way QSO using the repeater onboard, received effective satellite telemetry, or obtained satellite camera photos, we would like to invite you sending connection data package (audio or video evidence), satellite telemetry
data or photos received to Email: 6015(a)bayims.cn.

So that we can keep statistics records and deliver our appreciation toward you
in public. We would be pleased to exchange QSL card for QSO users, and some souvenirs for the telemetry or camera photos users.

We hope more Amateur youth space program will be brought to you in the near future!

E-mail Address: 6015 @bayims.cn
Post Address: Mr Xiangming TAOBeijing Bayi School, 29# Suzhou Street, Haidian
Dist, Beijing, China
P.O. 100080

http://www.bayims.cn/article-16881.html

BY70-1 FM transponder satellite
https://amsat-uk.org/2016/12/27/by70-1-fm-transponder-satellite/

BY70-1 FM contact video
https://amsat-uk.org/2016/12/30/by70-1-fm-transponder-contact/

See BY70-1 page on Roland PY4ZBZ website
http://www.qsl.net/py4zbz/by70.htm

[ANS thanks AMSAT-UK for the above information]

AMSAT Events

Information about AMSAT activities at other important events around the country. Examples of these events are radio club meetings where AMSAT Area Coordinators give presentations, demonstrations of working amateur satellites, and hamfests with an AMSAT presence (a table with AMSAT literature and merchandise, sometimes also with presentations, forums, and/or demonstrations).

*Saturday and Sunday, 11-12 March 2017 – ScienceCity in Tucson AZ

*Saturday, 18 March 2017 – Scottsdale SpringFest in Scottsdale AZ

*Friday through Sunday, 31 March–2 April 2017, NVCON in Las Vegas NV

*Wednesday, 5 April 2007 – presentation for Scottsdale Amateur Radio Club
in Scottsdale AZ

*Friday and Saturday, 7-8 April 2017, Green Country Hamfest in
Claremore OK

*Saturday, 6 May 2017 – Cochise Amateur Radio Association hamfest in
Sierra Vista AZ

*19-21 May 2017, HamVention in the Greene County Fairgrounds and
Expo Center, Dayton, Ohio

*Friday and Saturday, 9-10 June 2017, HAM-COM in Irving TX

*Saturday, 10 June 2017 – Prescott Hamfest in Prescott AZ

[ANS thanks AMSAT-NA for the above information]

ARISS News

Successful Contacts

* Collège André Malraux, Chatelaillon-Plage, France, telebridge via ON4ISS
The ISS callsign was scheduled to be FXØISS
The scheduled astronaut was Thomas Pesquet KG5FYG
Contact was successful Mon 2017-02-13 14:00:35 UTC 67 deg.
Astronaut Thomas Pesquet, KG5FYG answered 19 questions prepared by
students for an audience 190 students and guests. HamTV downlinked
Pesquet live throughout the entire contact thanks to British Amateur
TV Club merging 2 HamTV ground stations' received signals. The live-stream
was seen by 230 of the general public via BATC connections.
Watch a recording of the live-streamed HamTV downlink:
https://drive.google.com/file/d/0Byp8JadKjPOmOUFCeDdZMFhSMm8/view?usp=sharing
Watch France's national television's report at:
https://www.youtube.com/watch?v=Bb7amhLMgA8&feature=em-upload_owner

* John Glenn Middle School, Maplewood MN, direct via KØJDD
The ISS callsign was scheduled to be NA1SS
The scheduled astronaut was Shane Kimbrough KE5HOD
Contact was successful: Wed 2017-02-22 18:47:59 UTC 25 deg
All 16 questions answered with a 73 round. Students, teachers
and parents came to 900 individuals. One television station and
four print media outlets were also in attendance. They reported
full quieting for the entire pass.

* Ecole primaire Elie Desplan, Boissières, France and Marie Castang,
Saint Dionisy, France, direct via F4HHV
The ISS callsign was scheduled to be FXØISS
The scheduled astronaut was Thomas Pesquet KG5FYG
Contact was successful: Sat 2017-02-25 13:14:15 UTC 58 deg
Successful contact between the 2 schools of Boissieres and Saint Dionisy
with Thomas Pesquet.
All 20 questions answered, clear audio all the way long

(Normal and acceptable UHF noise at the beginning and at the end)
Reported 350 people present in the gymnasium.
Also success for the Ham video transmission through BATC, but also
through the local Ham-Video Ground Station.
Press and media presence:
1 national TV (BFM) -> scheduled broadcasted 2/25
2 Regional TVs (France 3), TV TV-Sud
1 Regional radio (France Bleu)
Several Regional newspapers including Le Midi Libre

Upcoming Contacts

* 3rd Junior High School, Komotini, Greece, direct via SV7APQ
The ISS callsign is presently scheduled to be OR4ISS
The scheduled astronaut is Shane Kimbrough KE5HOD
The contact will be rescheduled for a later date.

* ABOUT GAGARIN FROM SPACE, Space Odyssey Project, Krasnoyarsk, Russia,
direct via RVØADW
The ISS callsign is presently scheduled to be RSØISS
The scheduled astronaut is Andrei Borisenko
Contact is a go for Sat 2017-02-25 08:36 UTC

* ABOUT GAGARIN FROM SPACE, Raduga Space Communication Center of St.
Petersburg, Russia, direct via RA1AJN
The ISS callsign is presently scheduled to be RSØISS
The scheduled astronaut is Sergey Ryzhikov
Contact is a go for Sun 2017-02-26 09:15 UTC

* Student Space Technology Association, Knoxville, TN, direct via AA4UT
The ISS callsign is presently scheduled to be NA1SS
The scheduled astronaut is Shane Kimbrough KE5HOD
Contact is a go for: Wed 2017-03-01 19:08:03 UTC 49 deg

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ARISS is always glad to receive listener reports for the above contacts.
ARISS thanks everyone in advance for their assistance. Feel free to send
your reports to aj9n(a)amsat.org or aj9n(a)aol.com.
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Message to US Educators
Amateur Radio on the International Space Station
Contact Opportunity

Call for Proposals
Proposal Window February 15 – April 15, 2017

The Amateur Radio on the International Space Station (ARISS) Program is
seeking formal and informal education institutions and organizations,
individually or working together, to host an Amateur Radio contact with
a crew
member on board the ISS. ARISS anticipates that the contact would be held
between January 1, 2018 and June 30, 2018. Crew scheduling and ISS
orbits will
determine the exact contact dates. To maximize these radio contact
opportunities, ARISS is looking for organizations that will draw large
numbers of
participants and integrate the contact into a well-developed education
plan.

The deadline to submit a proposal is April 15, 2017. Proposal information
and documents can be found at www.arrl.org/hosting-an-ariss-contact.

The Opportunity
Crew members aboard the International Space Station will participate in scheduled Amateur Radio contacts. These radio contacts are approximately 10
minutes in length and allow students to interact with the astronauts through
a question-and-answer session.

An ARISS contact is a voice-only communication opportunity via Amateur Radio between astronauts and cosmonauts aboard the space station and classrooms and communities. ARISS contacts afford education audiences the opportunity to learn firsthand from astronauts what it is like to live and work in
space and to learn about space research conducted on the ISS. Students also
will have an opportunity to learn about satellite communication, wireless technology, and radio science. Because of the nature of human spaceflight and
the complexity of scheduling activities aboard the ISS, organizations must demonstrate flexibility to accommodate changes in dates and times of the radio contact.

Amateur Radio organizations around the world, NASA, and space agencies in Russia, Canada, Japan and Europe sponsor this educational opportunity by providing the equipment and operational support to enable direct communication between crew on the ISS and students around the world via Amateur Radio.
In the US, the program is managed by AMSAT (Radio Amateur Satellite Corporation) and ARRL (American Radio Relay League) in partnership with NASA and CASIS (Center for the Advancement of Science in Space).

More Information
Interested parties can find more information about the program at www.ariss.org and www.arrl.org/ARISS.

For proposal information and more details such as expectations, proposal guidelines and proposal form, and dates and times of Information Sessions go
to http://www.arrl.org/hosting-an-ariss-contact.
Please direct any questions to ariss(a)arrl.org.

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ARISS is always glad to receive listener reports for the above contacts. ARISS thanks everyone in advance for their assistance. Feel free to send your reports to aj9n(a)amsat.org or aj9n(a)aol.com.

Listen for the ISS on the downlink of 145.8Ø MHz.

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All ARISS contacts are made via the Kenwood radio unless otherwise noted.

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Several of you have sent me emails asking about the RAC ARISS website and not being able to get in. That has now been changed to
http://www.ariss.org/

Note that there are links to other ARISS websites from this site.

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Looking for something new to do? How about receiving DATV from the ISS?

If interested, then please go to the ARISS-EU website for complete details. Look for the buttons indicating Ham Video.

http://www.ariss-eu.org/

If you need some assistance, ARISS mentor Kerry N6IZW, might be able to provide some insight. Contact Kerry at kbanke(a)sbcglobal.net

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ARISS congratulations the following mentors who have now mentored over 100 schools:

Satoshi 7M3TJZ with 123
Gaston ON4WF with 123
Francesco IKØWGF with 119

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The webpages listed below were all reviewed for accuracy. Out of date webpages were removed and new ones have been added. If there are additional ARISS websites I need to know about, please let me know.

Note, all times are approximate. It is recommended that you do your own orbital prediction or start listening about 10 minutes before the listed time.
All dates and times listed follow International Standard ISO 8601 date and time format YYYY-MM-DD HH:MM:SS

The complete schedule page has been updated as of 2017-02-23 05:00 UTC. Here you will find a listing of all scheduled school contacts, and questions, other ISS related websites, IRLP and Echolink websites, and instructions for any contact that may be streamed live.

http://www.amsat.org/amsat/ariss/news/arissnews.rtf
http://www.amsat.org/amsat/ariss/news/arissnews.txt

Total number of ARISS ISS to earth school events is 1116.
Each school counts as 1 event.
Total number of ARISS ISS to earth school contacts is 1080.
Each contact may have multiple schools sharing the same time slot.
Total number of ARISS supported terrestrial contacts is 47.

A complete year by year breakdown of the contacts may be found in the file.
http://www.amsat.org/amsat/ariss/news/arissnews.rtf

Please feel free to contact me if more detailed statistics are needed.

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The following US states and entities have never had an ARISS contact: Arkansas, Delaware, South Dakota, Wyoming, American Samoa, Guam, Northern Marianas Islands, and the Virgin Islands.

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QSL information may be found at:
http://www.ariss.org/qsl-cards.html

ISS callsigns: DPØISS, IRØISS, NA1SS, OR4ISS, RSØISS

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The successful school list has been updated as of 2017-02-23 05:00 UTC.

http://www.amsat.org/amsat/ariss/news/Successful_ARISS_schools.rtf

Frequency chart for packet, voice, and crossband repeater modes showing
Doppler correction as of 2005-07-29 04:00 UTC
http://www.amsat.org/amsat/ariss/news/ISS_frequencies_and_Doppler_correction
.rtf

Listing of ARISS related magazine articles as of 2006-07-10 03:30 UTC.
http://www.amsat.org/amsat/ariss/news/ARISS_magazine_articles.rtf

Check out the Zoho reports of the ARISS contacts

https://reports.zoho.com/ZDBDataSheetView.cc?DBID=412218000000020415
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Exp. 49 on orbit
Shane Kimbrough KE5HOD
Andrei Borisenko
Sergey Ryzhikov

Exp. 50 on orbit
Peggy Whitson
Thomas Pesquet KG5FYG
Oleg Novitskiy

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Watch
http://www.ariss.org/upcoming-contacts.html
for information about upcoming contacts as they are scheduled.

[ANS thanks ARISS and Charlie, AJ9N for the above information]

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In addition to regular membership, AMSAT offers membership in the
President's Club. Members of the President's Club, as sustaining
donors to AMSAT Project Funds, will be eligible to receive addi-
tional benefits. Application forms are available from the AMSAT
Office.

Primary and secondary school students are eligible for membership
at one-half the standard yearly rate. Post-secondary school students
enrolled in at least half time status shall be eligible for the stu-
dent rate for a maximum of 6 post-secondary years in this status.
Contact Martha at the AMSAT Office for additional student membership
information.

73,
This week's ANS Editor,
Joe Spier, K6WAO
k6wao at amsat dot org